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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/082,833 | 02/25/2002 | Stephen M. Graves | P00079US2A | 4638 |

7590 08/11/2004
Chief Intellectual Property Counsel
Bridgestone Americas Holding, Inc.
1200 Firestone Parkway
Akron, OH 44317

EXAMINER

PAK, SUNG H

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2874

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/082,833 | Applicant(s) GRAVES ET AL. | |
| | Examiner Sung H. Pak | Art Unit 2874 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>0602</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Applicant's amendment filed 5/21/2004 has been entered. Claims 15-42 are now pending. In response to the amendment, the claims have been examined on merit and prior art rejections are made in this office action.

Information Disclosure Statement

Information disclosure statement filed 6/03/2002 has been considered. Please refer to the initialed copy of the information disclosure statement.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

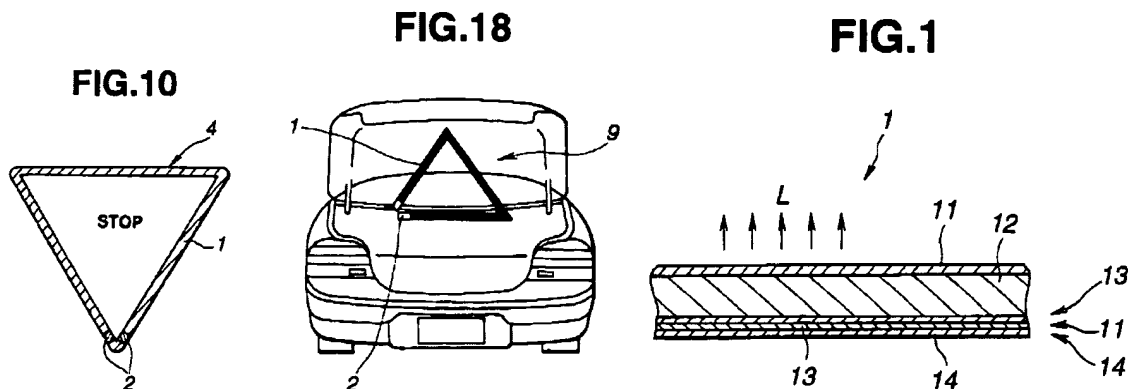
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 15, 20, 21, 25, 26, 34, 39, 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugiyama et al (US 5,982,969).



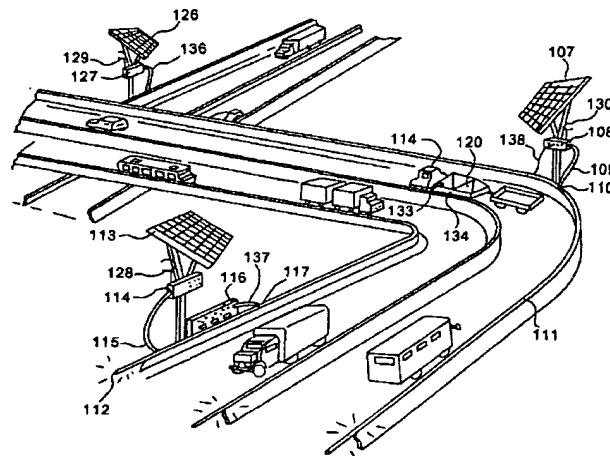
Sugiyama et al was cited in the information disclosure statement.

Sugiyama discloses an optical device with all the limitations set forth in the claims, including: a delineation marker of a stop/ hazard sign (Fig. 10, Fig. 18- delineating the outer edge of stop/hazard sign); at least one optical transmission tube assembly disposed on the marker of stop/hazard sign (column 13 lines 22-25); the optical transmission tube assembly visibly detected by a vehicle driver to convey road-related information to the driver (Fig. 10, Fig. 18); wherein the optical transmission tube assembly includes an elongated body that is substantially transparent (Fig. 1, column 4 lines 25-29); a reflective layer extending along at least a portion of the length of the elongated body ('13' Fig. 1, column 4 lines 30-31); a light source provided at an end portion of the elongated body (Fig. 4-5); wherein the optical transmission tube assembly is configured to transmit light along at least a portion of the length of the elongated body when light is emitted from the light source (Fig. 1); wherein the light source includes a light emitting diode (column 7 line 62); wherein the light is emitted radially outward (Fig. 2); wherein the road-related information conveyed to the vehicle driver includes the

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existence of a road hazard or road obstacle (Fig. 10, Fig. 18); wherein the optical transmission tube assembly is illuminated to be visibly detected (Fig. 1).

Claim 15-19, 22-24, 27-38, 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Tribelsky et al (US 6,592,245 B1).



Tribelsky discloses an optical system with all the limitations set forth in the claim, including: a delineation marker (delineating the edges of the road- see figure above); wherein the delineation marker includes a guard rail for the road (figure above); wherein the guard rail extends along a curved portion of the road (figure above); wherein the delineation maker includes plurality of guard rails that are plurality of barrier walls (on either side of the road- see figure above); one or more optical transmission tubes provided on one or more of the barrier walls, the transmission tubes configured to illuminate and outline the travel path (Figure above; abstract); wherein the optical transmission tube assembly is connected to the top edge of the delineation marker (figure above); wherein the delineation marker convey impending curve or edge of the road (figure above); wherein the illumination enhances vehicle driver preview distance (inherently disclosed by the teaching of the reference).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tribelsky et al (US 6,592,245 B1) in view of Sugiyama et al (US 5,982,969).

Tribelsky discloses an optical system with all the limitations set forth in the claims as discussed above, except it does not teach the use of a reflecting layer in a strip form extending along at least a portion of the length of the optical transmission tube.

Sugiyama explicitly teaches the use of a reflective layer strip in extending along at least a portion of the length of the optical transmission tube (Fig. 1-2; see discussion above). The use of a reflective layer on optical transmission tube is advantageous and desirable, because it efficiently directs the transmitted light in the illumination direction. Thus, the reflective layer increases the illumination efficiency of the device.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Tribelsky device to have a reflective layer strip extending along at least a portion of the length of the optical transmission tube.

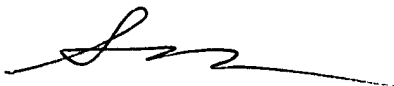
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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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Sung H. Pak
Examiner
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